

UNITED STATES DEPARTMENT OF AGRICULTURE

BUREAU OF ENTOMOLOGY

FOREST INSECT INVESTIGATIONS

ST. JOE NATIONAL FOREST
INSECT SURVEY
1935

Copies Sent:

Dr. Craighead - 1

R. f., Missoula - 1

Forester thru R. F., Missoula - 1

Supervisor, St. Joe N. F. - 1

" " , Clearwater N. F. - 1

Miller - 1

Keen - 1

Beal - 1

Extra Copy

By
T. T. Terrell
Scientific Aid

Forest Insect Laboratory
Coeur d'Alene, Idaho
Jan. 2, 1936

ST. JOE NATIONAL FOREST
INSECT SURVEY
1935

During the latter part of August and early September, sample strips were run in the mature stands of the St. Joe National Forest to determine the status of the mountain pine beetle infestation. As on other forests, the strips were one chain in width and were plotted in various parts of the stands to secure a fair sample of the area. During the course of the survey, 2,147 acres of strips were run on the five units into which the forest has been divided.

The following table is a summary of the data secured and shows the number of trees lost per acre over a two-year period. Although the taking of data for the previous year is not usually considered feasible, it was done in this case because no other comparative data were available for 1934.

ST. JOE NATIONAL FOREST

Unit	Acres : Surveyed	Attacks per Acre						1935 Infested Trees	
		1934			1935			WP	LPP
		: WP	: LPP	: Total	: WP	: LPP	: Total		
Clarkia	: 19,000	: 0	: 0	: 0	: .025	: 0	: .025	: 475	: 0
			: No						
Round Top	: 30,000	: .026	: data		: .014	: .016	: .030	: 420	: 480
Fishhook	: 32,000	: .017	: .097	: .114	: .032	: .058	: .090	: 1,024	: 1,856
Sisters	: 54,000	: .005	: .290	: .295	: .022	: .100	: .122	: 1,188	: 5,400
Wards Peak	: 68,000	: .010	: .218	: .228	: .008	: .164	: .172	: 544	: 11,152
Total	: 203,000	: .011	: .194	: .203	: .018	: .093	: .111	: 3,651	: 18,888

A comparison of the total 1934 and 1935 attacks per acre will show a 45 percent decrease.

Clarkia Unit:

The Clarkia Unit comprises two areas: one of 15,000 acres in Gramp and St. Maries Creeks, and 4,000 acres in Childs Creek. The infestation is very light--not over what is normally found in white pine stands. Only 5 infested trees were found on 176 acres of strip, all of which were in Childs Creek Unit where logging operations were in progress.

Round Top Unit:

The Round Top Unit includes all the mature timber south of the ridge running east and west between Breezy Point and Bathtub Mountain. No more than a normal infestation was encountered on the unit. Sample strips totalling 492 acres were run and 15 infested trees were found, 8 of which were lodgepole pine. Data relative to the 1934-attacked lodgepole were neglected while running these strips but, had they been taken, there is little doubt that the data of the 1935 infestation would have shown a decrease from the previous year.

Fishhook Basin:

Fishhook Basin includes all the mature timber in the Fishhook drainage. During the survey of this unit, 533 acres of sample strip were examined and 17 attacked white pine and 31 attacked lodgepole were found. Of the white pine, 8 were windfalls.

Sisters Unit:

The Sisters Unit contains all the acreage of mature timber between the Bathtub Mountain, Round Top Ridge, and the St. Joe River between Conrad Crossing and Turner Flats. This area runs heavier to lodgepole pine and shows evidence of considerable kill in the past few years. However, as the present year's infestation shows a marked decrease over last, it is believed that the epidemic is definitely on the decline.

Wards Peak:

The Wards Peak Unit includes the mature stands from Simmon's Creek north between the St. Joe River and the Montana State boundary line. The stand is virtually all lodgepole pine with small areas of white pine along the river and creek bottoms. It is quite evident that the timber in this unit has suffered rather severe losses during the past few years, especially near the mouth of Gold Creek. The 1935 infestation is somewhat heavier in the vicinity of Wards Peak and seems to be spreading in a northwesterly direction. As the timber stands end near Quarles Peak, it will not be long before the infestation has reached the limit of its advance.

CONCLUSIONS

The mountain pine beetle infestation is light throughout the white pine type of the forest and varies in numbers of trees attacked per acre somewhat in accordance to the density of the timber stand.

The infestation in lodgepole pine assumes epidemic proportions in the lodgepole pine stands of the Sisters and Wards Peak Units, with a

heavier concentration of loss in Gold Creek. The infestation is now on the decline in both units except in the head of Quartz Creek near Wards Peak.

If a comparison may be drawn from the Clearwater Forest, where an infestation in a mixed white pine-lodgepole stand decreased rapidly when the outbreak in lodgepole pine died out, it is felt that a similar condition is taking place on the St. Joe Forest and that the white pine stands will not be endangered.

Further extensive examinations of the area should suffice as a precautionary measure to detect any serious development that might take place.

Respectfully submitted,


T. T. Terrell
Scientific Aid

Coeur d'Alene, Idaho

Jan. 2, 1936

COST ANALYSIS OF 1935 SURVEY
ST. JOE NATIONAL FOREST

Transportation - - - - -	\$76.46
Subsistence - - - - -	99.08
Wages - - - - -	<u>605.75</u>
Total Charge - - - - -	\$781.29
Terrell's Salary - - - - -	<u>87.50</u>
<u>Total Field Cost - - - - -</u>	<u>\$868.79</u>
Effective Man-days - - - - -	73
Non-Effective Man-days - - - - -	<u>112</u>
Total Man-days - - - - -	185
Cost per Acre of Area Surveyed (203,000) - - - - -	.004
Miles of Sample Strip - - - - -	268 $\frac{1}{2}$
Miles of Sample Strip per Effective Man-day - - - - -	3.68